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ABSTRACT

The Task Force on Educational Telecommunications was formed to develop a statewide approach to educational telecommunications (e.g., public, cable, and satellite television; audio and video tapes; teleconferencing; and computer conferencing) for the Virginia Community College System (VCCS). The task force assumed that the instruction should have the same academic rigor and quality as traditional course offerings; that the systemwide approach should take into account diversity among individual colleges; and that the goals of media-based instruction should be to increase educational access, while increasing efficiency and reducing the costs of course delivery. The task force identified several key instructional and faculty issues, including equity of course availability, flexibility without compromise of academic quality and integrity, planning and evaluation, balance in resource allocation, interaction between teacher and learner, faculty employment, instructional quality, staff support, and instructional management. In light of its findings, the group adopted the following recommendations: (1) that the VCCS adopt as goals ensuring the availability of a minimal core of offerings to all colleges, enhancing existing educational offerings through a coordinated system of educational telecommunications; and providing adequate campus and systemwide networked computational and telecommunications resources for the origination and reception of these course offerings; (2) that the VCCS develop and implement a statewide system of educational telecommunications called the "Extended Learning Telecommunications Network"; (3) that the State Board establish a special task force to implement the network, develop plans for increasing library collections and student/faculty access to them through technology, implement a comprehensive faculty development program, and ensure equal faculty access to the telecommunications network; and (4) that an ongoing committee structure be developed to maintain the network. A budget for the network and a report on a roundtable on educational telecommunications are appended. (AYC)

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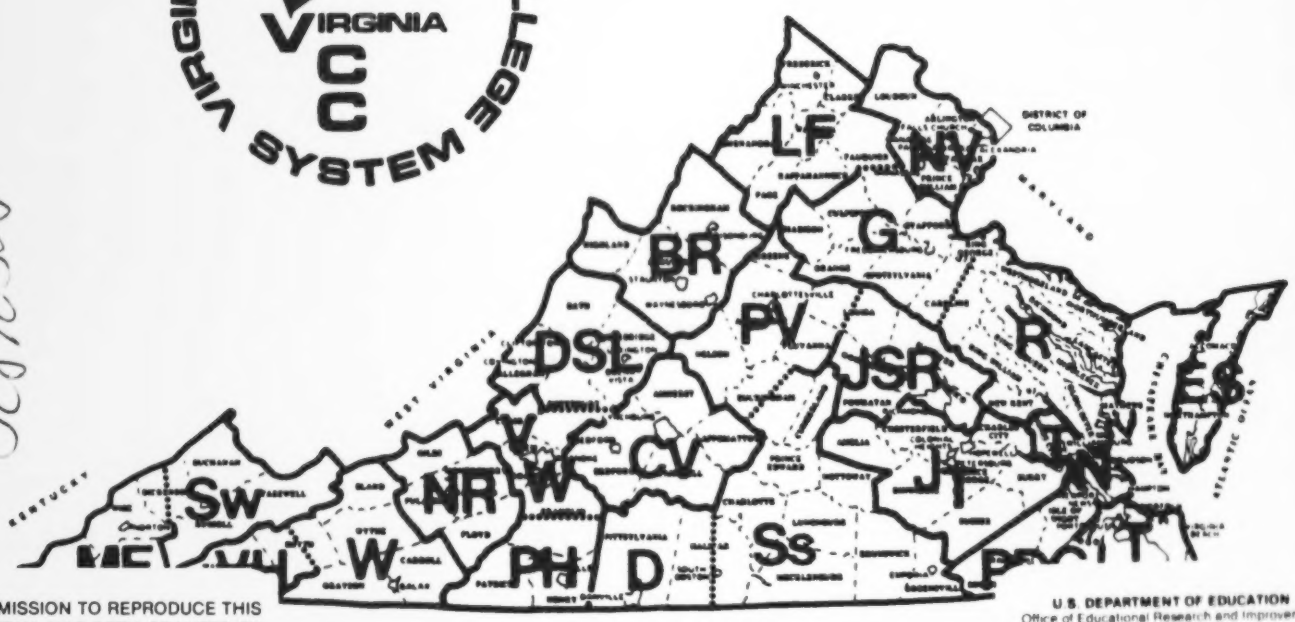
Report of the

VCCS Task Force

on

Educational Telecommunications

October 9, 1989



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VIRGINIA COMMUNITY COLLEGE SYSTEM

REPORT OF THE

VCCS TASK FORCE ON EDUCATIONAL TELECOMMUNICATIONS

October 9, 1989

VCCS TASK FORCE ON EDUCATIONAL TELECOMMUNICATIONS

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REPORT OF THE

VCCS TASK FORCE ON EDUCATIONAL TELECOMMUNICATIONS

Executive Summary

In April 1989, the State Board for Community Colleges and Chancellor Jeff Hockaday formed a Task Force on Educational Telecommunications to consider a system-wide approach to educational telecommunications and other media-based instruction. The charge for such an approach was an outgrowth of both the recent long range planning effort of the Virginia Community College System as well as the existent efforts of Virginia community colleges in administrative computer networking and educational telecommunications.

In considering a system-wide approach to educational telecommunications and other media-based instruction, the task force assumed both that the instruction should have the same academic rigor and quality of traditional course offerings and that it should take into account diversity between and among individual colleges. The overall goal of the instruction should be to provide greater course access to the many constituencies of Virginia community colleges, with opportunities for increased efficiency and reduced costs in course delivery.

The task force identified several key instructional and faculty issues. Among the instructional issues were equity of course offering availability, flexibility without compromise of academic quality and integrity, planning and evaluation, balance in the allocation of resources, and interaction between teacher

and learner. The faculty issues focused on matters of employment (e.g., workload assignments and unfamiliarity with the technology and how to use it), instructional quality, staff support, and instructional management (e.g., FTES and FTEF allocations, budgeting for instructional materials, and costs for services rendered).

In short, the Task Force on Educational Telecommunications found the case for incorporating a state-wide system of educational telecommunications and other media-based instruction into the future of Virginia community colleges overwhelmingly convincing. It also found the issues associated with such a move requiring thoughtful action. The task force offers seven recommendations in light of its findings. These recommendations are delineated below.

1. That the Virginia Community College System adopt the following three overall goals:

    *To ensure that a minimal core of offerings be available to all twenty-three community colleges and to provide a means for enhancing existent educational offerings at all colleges through a coordinated system of educational telecommunications and other media-based instruction.

    *To provide adequate campus and system-wide networked computational resources.

    *To provide adequate campus and system-wide telecommunications resources for both origination and reception of these course offerings.

2. That the Virginia Community College System develop and implement a state-wide system of educational telecommunications which incorporates these three overall goals, and that this state-wide system be called the VCCS "Extended Learning Telecommunications Network."

3. That the State Board for Community Colleges and the Chancellor establish a special task force to implement the state-wide Extended Learning Network.

4. That the special task force continue planning for how library and Learning Resources Center collections can be increased and made more accessible to students and faculty through technology.

5. That the special task force develop and implement a comprehensive Faculty Development Program which would support those faculty who are enthusiastic about telecommunications technology and would reassure others.

6. That the special task force develop an appropriate means to ensure broad access by faculty to the telecommunications Network on an equal basis.

7. That, once the special task force has completed its work of implementing the state-wide Extended Learning Network, the State Board for Community Colleges and the Chancellor replace it with an "on-going" committee structure for the maintenance of the Network and for the subsequent development system-wide of educational telecommunications and other media-based instruction.

REPORT OF THE

VCCS TASK FORCE ON EDUCATIONAL TELECOMMUNICATIONS

Introduction

> The potential for technology to enhance the teaching and learning process is immense. The use of technology is not, however, an end in itself, and far too often expected gains have not been realized. For instance, while educational television is a valuable tool, it has not made the classroom obsolete. Technology, properly applied, can make it more feasible and/or more economical to meet student needs regarding time and location of instruction, to take over routine drill and practice in order to allow the instructor to engage in more productive personal interaction with students, or in some other way to enhance the learning process. When technology accomplishes this at a reasonable cost, it should be considered. When it does not, it should not be used (p. 33).

This excerpt is taken from "The Classroom and Instruction" chapter of the VCCS long range plan. Without question, it makes a powerful philosophical statement on the appropriate role of educational telecommunications and other media-based instruction in the future of Virginia community colleges. It both recognizes the power of technology as an educational resource and cautions the developers and users to view the technology as a "means in" rather than an "end of" the learning process. By placing the focus clearly on process rather than product, the excerpt also implies that offerings via educational telecommunications and other media-based instruction should be of high academic quality and should possess the same academic rigor of those generated by the more traditional modes of instruction.

The Virginia Community College System has long been associated with excellence in teaching and innovation in

instruction. At several VCCS colleges, both the excellence and innovation have been realized through educational telecommunications and other media-based instruction. In addition, the VCCS long ago put into place a computing network for coordinating system-wide the colleges' administrative computing needs and activities. In this sense, the call for a cohesive, system-wide approach to educational telecommunications and other media-based instruction is a logical extension of the individual instructional efforts already underway as well as the administrative computing network already in place.

In April 1989, the State Board for Community Colleges and Chancellor Jeff Hockaday formed a Task Force on Educational Telecommunications to consider such an approach to educational telecommunications and other media-based instruction. The above excerpt from the VCCS long range plan provided the focus and challenge for the collective effort of the task force. The report which follows is its response to this visionary call.

The report is organized into three sections. The first section gives an overview of the needs and issues surrounding the appropriate role educational telecommunications and other media-based instruction should play in the future of Virginia community colleges. The second section outlines the proposed plan of the task force for implementing a state-wide system of educational telecommunications. The third section offers recommendations for the implementation of the proposed plan and for the subsequent development system-wide of the broader area of educational telecommunications and other media-based instruction.

Overview of Needs and Issues

The needs which drive the appropriate incorporation of educational telecommunications and other media-based instruction into the future of Virginia community colleges are compelling. The evidence demanding a broadly educated and technologically trained American citizenry is so commonly accepted that elaboration is unnecessary. Because of their mission and experience, community colleges in general, and Virginia community colleges in particular, are widely acknowledged as being strategically poised to play a crucial role in accomplishing this essential transformation in education.

To effect this transformation at an optimal level for all of the community college constituencies, however, a number of enabling conditions must be established. For example, small, rural community colleges must add both breadth and depth to their curricular offerings, and they must do so at an acceptable cost. The larger, more urban community colleges must create greater flexibility with their curricular offerings and still remain cost effective. The resultant enhanced curriculum cannot sacrifice quality in either the content or the design and delivery of instruction. In general, the implication is that in order to effect optimal learning throughout the Commonwealth, the community colleges of the Commonwealth must themselves have access to teacher expertise, to supportive information bases which are available for use by all students, and to a range of instructional modes through which new student populations can be reached. Educational telecommunications and other media-based

instruction should be employed to achieve these conditions. And, the transformation should be done through an efficient and effective system of telecommunications.

Instruction

Several process needs emerge as Virginia community colleges seek ways to implement in practice the theoretical merits of educational telecommunications and other media-based instruction. These needs are grounded, in part, in accepted instructional goals which hold true regardless of the methodology employed. They include quality assurance, holistic student development, and attention to diversity among learners. However, the needs must also take into account diversity between and among individual colleges, the character of their respective service regions, and the unique local conditions which may infringe upon their practices. With these areas come at least five readily identifiable issues.

*Equity of Course Offering Availability. This issue is perhaps the most overriding one. Clearly, one of the primary advantages of educational telecommunications and other media-based instruction rests with their ability to provide greater course access to the many constituencies of Virginia community colleges. Through educational telecommunications and other media-based instruction, those courses which, for a variety of reasons, could not be offered at various individual community colleges can now be offered. Technically specialized courses and general education electives which have too low enrollment for a single community college are but two examples. Indeed, this first instructional issue may well be the overriding goal for Virginia community colleges as it moves system-wide to approach educational telecommunications and other media-based instruction.

*Flexibility without Compromise of Academic Quality/Integrity. It is important that capability for individual college adaptation be built into the

system for educational telecommunications and other media-based instruction. This flexibility must address the times and dates of local presentation, the means by which the offering may be marketed, and the ways in which the offering may be locally packaged, i.e., its suitability for add-on, wrap-around, or blended instructional components. And, of course, the real question may be how this flexibility can be maintained in the context of cost effectiveness based in large measure on mass distribution while maintaining the quality of instruction.

*Planning and Evaluation. Local users must enjoy some measure of influence in the development and delivery of instructional offerings made available through the system for educational telecommunications and other media-based instruction. What should be the mix of credit, non-credit, and CEU offerings? Through what kind of evaluation mechanisms may local users help ensure the quality of the offerings? (This question may be asked with regard both to the actual quality, i.e., the content delivery, and the perceived quality, i.e., user-friendliness for the local facilitator and sense of "high touch" for the student.) What is the obligation of an originator who wishes to access the system in order to meet the needs of smaller external users as well as its own needs and those of larger users?

*Balance in the Allocation of Resources. Many individual colleges may want to use educational telecommunications and other media-based instruction to improve the quality of instruction on their own campuses. While this use can be demonstrated to be effective, it is also expensive. Given the reality of scarce resources, how may the need for a system-wide approach to educational telecommunications and other media-based instruction be balanced with the other instructional needs of individual colleges?

*Interaction between Teacher and Learner. Research on teaching and learning suggests that attention to different learning styles, fostering of active engagement of students in the learning process, and timely feedback between teachers and learners are key components of effective teaching. Community colleges are characterized, in part, by their positive, personal interaction between teacher and learner. This interaction often occurs within the context of small classes and through individual contact outside the classroom. How may responsiveness to and creativity with learning diversity be ensured in a system of educational telecommunications and other media-based instruction? Furthermore, what mechanisms

may be employed in the system to ensure the personal contact between learner and teacher is not lost?

Faculty

The concerns and requirements for faculty within a system of educational telecommunications and other media-based instruction are really quite basic. Without question, faculty will be affected quickly upon the implementation of such a system. Some will employ the new technology with enthusiasm; some will have little understanding of it or little inclination to utilize it. Some may feel uncertain about it, perceiving a negative impact on workload assignments and curriculum development. And, some may feel unfamiliar with the new methods of instruction inherent in such a system. Simply put, with the implementation of a system of educational telecommunications and other media-based instruction, faculty must know and must be provided opportunities to learn about the capabilities of the system and the mechanics in how to utilize it effectively. They must be provided an incentive for participating in the system and not be expected to accommodate it on top of an already heavy workload. And, they must be provided a nurturing environment and encouraged to be risk-takers within the system.

Four faculty issues related to the introduction and implementation of the system emerge. These are delineated below.

*Employment. This issue includes possible impact on workload assignments, unfamiliarity with the technology and how to utilize it, and general lack of knowledge regarding instructional capabilities .

*Instructional Quality. This issue includes instructor qualifications and training to use the methodology associated with educational telecommunications and other media-based instruction, methodology for

meaningful student evaluation, and distance learning and its impact on the students.

*Staff Support. This issue especially focuses on providing technical assistance to faculty.

*Instructional Management. This issue includes the determination of FTES and FTEF allocations, responsibility for curriculum planning, costs for services rendered, and budgeting for instructional materials.

Summary

In short, the Task Force on Educational Telecommunications found the case for incorporating a state-wide system of educational telecommunications and other media-based instruction into the future of Virginia community colleges overwhelmingly convincing. It also found the needs and issues associated with such a move requiring thoughtful action. The task force offers two primary recommendations in light of its findings.

*That the Virginia Community College System adopt the following three overall goals:

1. To ensure that a minimal core of offerings be available to all twenty-three community colleges and to provide a means for enhancing existent educational offerings at all colleges through a coordinated system of educational telecommunications and other media-based instruction.

2. To provide adequate campus and system-wide networked computational resources.

3. To provide adequate campus and system-wide telecommunications resources for both origination and reception of these course offerings.

*That the Virginia Community College System develop and implement a state-wide system of educational telecommunications which incorporates these three overall goals, and that this state-wide system be called the VCCS "Extended Learning Telecommunications Network."

The proposed plan for such a system is outlined in the next section of this report.

VCCS Extended Learning Telecommunications Network

The VCCS Extended Learning Telecommunications Network would provide a means for using telecommunications system-wide to achieve five basic goals. These goals are as follows:

1. To provide greater access to courses and non-credit satellite, microwave, and phone line programming across all twenty-three Virginia community colleges.
2. To provide opportunities for increased efficiency in course delivery.
3. To reach new student populations.
4. To enhance instructional quality.
5. To reduce telecommunications costs to individual colleges through system-wide cooperation and licensing.

The Network would offer a variety of courses through telecommunications to students at all Virginia community colleges. It would be designed to be flexible enough to allow individual colleges wide latitude in using the services and would enhance, rather than restrict or inhibit, the existing extended learning programs already in place at some of the colleges. It would make cost effective use of telecommunications and not be limited to just one delivery system. Participation in the Network would be voluntary.

Overall Organization of the Network

To function effectively and efficiently, the Network would be based around a single hub that could function as an information clearinghouse and coordinator of network activities.

Given its extensive investment and experience in telecommunications, Northern Virginia Community College would serve as the hub of the Network. The Network would have five primary functions. These functions are as follows:

1. To provide state-wide licensing of telecourses and satellite programming, and state-wide purchasing of satellite transponder time for VCCS use.

2. To distribute live courses to all Virginia community colleges through the use of appropriate telecommunications. (This distribution may involve the use of satellite transmission, compressed video, audio or audiographic teleconferencing, ITFS television, and video tape and/or computer conferencing. The courses themselves may be designed to be offered in classroom settings or to individuals in their homes or offices.)

3. To arrange for individual institutions to use existing pre-recorded telecourses and live teleconferences at the lowest possible cost. (These courses may be produced by other VCCS colleges or may be licensed from other producers/distributors such as PBS's Adult Learning Service.)

4. To plan, design, and coordinate telecommunications upgrades based on newly emerging technologies that will allow the VCCS to establish a full-motion two-way video connection to interconnect all VCCS colleges within the next five years. (This new video system would make the delivery of live instruction among college courses easier and more natural for both students and faculty.)

5. To provide for faculty development and instructional systems support in the use of telecommunications for distance learning.

Staffing of Network

In order for the Network to function as outlined for all twenty-three Virginia community colleges, adequate staffing and support are absolute requisites. The Network would be staffed at the NVCC hub by a Network director, two engineers, two

instructional technologists, and a secretary. In addition, there would be seven new regional Network facilitators placed across the state. These regional facilitators would work with the staff of the NVCC hub and assist the individual colleges to make use of the available telecommunications resources. They would also assist with faculty development in the use of telecommunications, scheduling and logistics, and coordination with local public television stations and cable-tv systems in each region and with local telephone companies. They would be assigned to and employed by a particular community college in the designated region. The regions themselves could be setup to take maximum advantage of the state's existing telecommunications networks.

Equipment for Network

In addition to the staffing requirement, every VCCS campus would need to be equipped with a classroom capable of receiving electronic instruction so that it could be tied into the Network. The general approach to this action should be consistent with the philosophy and practices of the Virginia Department of Information Technology (DIT) and the Council of Information Management (CIM) on matters regarding telecommunications. While there is certainly a great need to get the Network functioning as soon as possible with existing technology, there should also be a provision which builds for the future--when it may be both desirable and feasible to provide a two-way video network among all Virginia community colleges.

Delivery Options for Network

Several options for using courses offered on the Network would be available. The decision on which method of course

delivery to use would be made on a course by course basis with all options available to the individual college or colleges involved. Regardless, the chosen mechanism should be consistent with the relevant criteria of the Commission on Colleges of the Southern Association of Colleges and Schools.

For example, if a college wants only to use the materials provided through the Network and offer the course itself, then that particular college might pay a flat fee for each student registered in a given course and receive the student credit hours generated. If there were no faculty member available or the projected enrollments were too small, then the particular college or colleges involved might choose to allow another of the VCCS colleges to offer the course in their service area through telecommunications and receive a small flat fee for each registered student in return for providing such services as use of the Learning Resources Center and use of the testing laboratory. In this case, the college providing the instruction would receive the student credit hours generated. Still another option might be to allow the receiving college to pay a higher fee to the providing college and retain all of the FTES generated.

Regardless of the fee structure employed, a procedure would need to be developed to recognize the contribution to total VCCS enrollments made by those colleges which allow other VCCS colleges to offer courses in their service area. The procedure might take the form of an adjustment to the budget and space allocation models which returns part of each FTES generated to the particular college or colleges involved.

Other Matters of Policy and Procedure for Network

There are several other matters of policy and/or procedure which would also need to be set and/or established prior to offering courses across traditional boundaries. These are delineated below.

1. Policies and procedures for processing registrations, collecting fees, and reporting enrollments.

2. Policies and procedures for dealing with regional accreditation requirements and with standards for "credit" delivered through telecommunications.

3. Policies and procedures for dealing with faculty workload and related issues, most especially the development of formulae for determining FTEF allocation, faculty workload assignments, and costs for services rendered.

4. Policies and procedures for dealing with bookstores and student materials.

5. Policies and procedures for selecting courses and addressing curriculum-related issues and for dealing with schedule coordination and ensuring that complete information gets to faculty advisors and counselors in a timely manner.

As importantly, the whole matter of assessment for Network offerings would need to be addressed. Clearly an evaluation plan for assessing individual course outcomes, overall cost effectiveness, comparative cost effectiveness with alternate delivery systems, and the impact of offering additional courses beyond those normally available should be developed prior to offering courses through the Network. One or more outside evaluators should be brought in to work with college faculty and staff to develop the plan and conduct the evaluation. Procedures for determining who will be responsible for collecting and

analyzing the information, and who will be responsible for taking any action indicated by that analysis, should be developed.

The cost of providing educational telecommunications and media-based instruction varies greatly depending upon the technology utilized and the number of students enrolled. The relationship between costs and enrollments should be examined to determine an appropriate pricing policy, especially during the initial phases of implementation when the goal will be to encourage colleges to use the courses offered through the Network.

Finally, decisions need to be made about whether students should bear any additional costs associated with use of the Network. While seed money will provide for the establishment of the Network and will nurture it initially, there are likely to be on-going costs outside of those normally encountered in the traditional classroom environment. It must be determined whether these costs should be budgeted centrally by the VCCS, absorbed by the participating colleges, or shared with students through special fees.

Funding for the Establishment of the Network

The creation of the VCCS Extended Learning Network just described would require an initial commitment of funds for both capital expenditures and seed money to initiate programs. The start-up costs are beyond the current capability of the VCCS or any individual college or group of colleges. Without additional funds, the Network would be able to accomplish very little in a cost effective way. Needed funds would amount to a total of $2,883,000 over two years. These funds would provide for the

cost of electronically equipping classrooms at each VCCS campus, seed money for the development and transmission of the initial courses by satellite and other technologies, license fees for use of existing telecourses, and administrative expenses. A budget for the establishment of the Network was prepared and submitted as a VCCS initiative for the 1990-92 biennium; it is included as an addendum to this report.

Once the system has been implemented, an appropriate mechanism should be developed to ensure its continuing maintenance and operation. Careful consideration should be given to the development of a system-wide framework which would ensure that smaller colleges are not excluded from on-going, meaningful participation in the Network.

Supporting Recommendations for the Proposed Plan

The Task Force on Educational Telecommunications offers five additional recommendations. These are intended both to provide the ~~necessary support for the~~ proposed plan for the VCCS Extended Learning Network and to provide concrete direction for Virginia community colleges to move beyond the plan as they grapple with the multiple connections among the multiple realities of educational telecommunications and other media-based instruction. These recommendations are delineated below.

***That the State Board for Community Colleges and the Chancellor establish a special task force to implement the state-wide Extended Learning Network.**

The sheer scope of the Network, as well as the many matters of policy and procedure which must be addressed, lends

credibility to the need for such a group. Membership should include faculty, administrators, and technical staff familiar with telecommunications. The group should be formed as soon as possible, with or without the proposed funding. The work of the task force should be completed within two years.

Specific proposed short-range duties and responsibilities for this group follow. These short-range actions would advance the development of the Network and should be completed within the first few months of the operation of the task force.

1. Consider the development of and procedures for a VCCS steering committee on educational telecommunications at the policy level. The committee could be composed of presidents and deans/provosts, or it could make use of the existing committee structure within the Council of Presidents and the state-wide Deans/Provosts Curriculum Committee.

2. Identify a telecommunications contact person at the working level at each VCCS campus.

3. Establish and begin using communication loops that provide appropriate, timely, and supportive information directed appropriately and specifically to presidents, deans/provosts, and division chairmen, as well as to learning resources, audio-visual, continuing education, and extended learning institute staffs. The intent here would be to assist the groups understand the new tools available to them, see how others are using them, and see how they might be able to use them at their own colleges.

4. Assemble a detailed budget for the proposed plan for the VCCS Extended Learning Telecommunications Network.

A number of long-range actions should be taken by the special task force. These would prepare the groundwork for the Network so that it can begin functioning promptly and fully as funds become available. A suggested targeted completion date for

these proposed actions is within the first year of operation of the task force. The long-range actions are listed below.

1. Establish a base-line of actual telecommunications use within the VCCS.

2. Identify the structure, if any, in use at each VCCS college for current telecourse/satellite use.

3. Clarify the status and availability of the state-wide microwave network to all VCCS campuses.

4. Identify relevant technologies and related costs for interconnecting all VCCS campuses.

5. Identify specific equipment for the proposed electronic classrooms.

6. Develop a six-year plan (primarily for funding purposes) for interconnecting all VCCS campuses and integrating telecommunications into instruction within the VCCS.

7. Develop an evaluation plan for existing and future instructional telecommunications use.

8. Develop recommendations on the unresolved issues in the preliminary plan for the Network, including revisions to the VCCS budget allocation model, SCHEV faculty and space allocation models, registration processing, accreditation, transcript and enrollment status, faculty workload, bookstores, schedule and curriculum coordination, and communication for student advising.

9. Develop a clear set of policies for the initial operation of the Network.

***That the special task force continue planning for how library and Learning Resources Center collections can be increased and made more accessible to students and faculty through technology.**

Without question, an up-to-date telecommunications environment should be present at every VCCS college. This environment includes such applications as access to national on-line data bases, dial-in access for students and faculty to on-

line library catalogs, telefacsimile (FAX) transmission services, connection to local cable systems with cablecasting capability onto public access channels wherever possible, satellite downlinking, and access to microcomputers and other peripherals and software. Each library and Learning Resources Center should function to improve access to telecommunications technology for students and faculty. Regardless of where the equipment is located or how it is staffed, each library or Learning Resources Center should be able to assist students and faculty to access this environment by maintaining appropriate schedules, catalogs, resource materials, and up-to-date information on whom to contact and where to go to take advantage of a particular application.

Of course, new technological means for information storage and retrieval requires a large capital investment to convert existing holdings. There may be significant savings in ensuring that future acquisitions be in a different format--namely, one that does not require extensive shelf space and could be accessed more easily from remote locations.

***That the special task force develop and implement a comprehensive Faculty Development Program which would support those faculty who are enthusiastic about telecommunications technology and would reassure others.**

The program should feature faculty orientation and awareness, technological capabilities, faculty role and responsibilities, education and training, and a review of instructional management issues such as impact on workload assignments and compensation. In part, it could consist of seven

regional inservice faculty workshops. Funding through the Title II-Part B Program Funding for Staff Development from Carl Perkins Vocational Education Funds should be considered.

*That the special task force develop an appropriate means to ensure broad access by faculty to the telecommunications Network on an equal basis.

The task force should consider carefully issues of geography and limited fiscal resources at the college base which may prevent interested and capable teachers from originating instruction determined to be needed by the VCCS. The overall goal is to move toward a system which would ensure equal access by faculty throughout Virginia community colleges.

*That, once the special task force has completed its work of implementing the state-wide Extended Learning Network, the State Board for Community Colleges and the Chancellor replace it with an "on-going" committee structure for the maintenance of the Network and for the subsequent development system-wide of educational telecommunications and other media-based instruction.

Without question, the formation of the special task force to implement the Network would be an important first step in moving Virginia community colleges toward a system-wide approach to educational telecommunications and other media-based instruction. However, it would be just a <u>first</u> step. Once the Network is implemented, a mechanism for maintaining, monitoring, and refining it would need to be put into place. This mechanism could be a committee structure similar to the operational committee already in place for the VCCS Administrative Computer Network.

Summary List of Recommendations

1. That the Virginia Community College System adopt the following three overall goals:

    a. To ensure that a minimal core of offerings be available to all twenty-three community colleges and to provide a means for enhancing existent educational offerings at all colleges through a coordinated system of educational telecommunications and other media-based instruction.

    b. To provide adequate campus and system-wide networked computational resources.

    c. To provide adequate campus and system-wide telecommunications resources for both origination and reception of these course offerings.

2. That the Virginia Community College System develop and implement a state-wide system of educational telecommunications which incorporates these three overall goals, and that this state-wide system be called the VCCS "Extended Learning Telecommunications Network."

3. That the State Board for Community Colleges and the Chancellor establish a special task force to implement the state-wide Extended Learning Network.

4. That the special task force continue planning for how library and Learning Resources Center collections can be increased and made more accessible to students and faculty through technology.

5. That the special task force develop and implement a comprehensive Faculty Development Program which would support those faculty who are enthusiastic about telecommunications technology and would reassure others.

6. That the special task force develop an appropriate means to ensure broad access by faculty to the telecommunications Network on an equal basis.

7. That, once the special task force has completed its work of implementing the state-wide Extended Learning Network, the State Board for Community Colleges and the Chancellor replace it with an "on-going" committee structure for the maintenance of the Network and for the subsequent development system-wide of educational telecommunications and other media-based instruction.

VCCS EXTENDED LEARNING TELECOMMUNICATIONS NETWORK

Proposed Budget*

	Year 1	Year 2
Personnel (Includes Network Director, 2 Engineers, 2 Instructional Technologists, and 1 Secretary at the Hub; 7 Regional Facilitators)	$600,000	$630,000
Satellite Transponder Time (Includes 3 courses Spring 1991 for Year 1; 3 courses Summer 1991, 5 courses Fall 1991, 5 courses Spring 1992 for Year 2)	63,000	273,000
Broadcast Time on Public-TV (Includes cost for using PBS-ALS telecourses state-wide)	16,000	25,000
Electronic Classroom Equipment (Includes classroom equipment and furniture for each VCCS campus; such as monitors for satellite downlinks, audio teleconferencing equipment, computer conferencing equipment, fax machines)	510,000	---
Network Distribution Equipment (Includes equipment for current one-way video network and pilot testing of expansion to two-way video network)	100,000	350,000
Travel	15,000	15,000
Course Materials (Includes duplicating and postage)	12,000	32,000
Supplies (Includes video tape for course distribution and miscellaneous)	12,000	35,000
License Fees (Includes special consortial license fees and payments for telecourse rights)	35,000	70,000
Evaluation	2,000	3,000
Telephones (Includes 800 number for students)	3,000	10,000
Faculty Release Time for Course Development (Includes 50% for 10 people Year 1 and 20 people Year 2)	24,000	48,000
Total	$1,392,000	$1,491,000
Two-Year Total	$2,883,000	

*This budget was prepared and submitted as a VCCS Initiative for the 1990-92 biennium.

REPORT OF THE

VCCS TASK FORCE ON EDUCATIONAL TELECOMMUNICATIONS

A Postscript

This postscript is appended to the Report of the VCCS Task Force on Educational Telecommunications as a result of the November 17 Educational Telecommunications Roundtable of the 1989 VCCS Annual Meeting. It provides both a working definition of the term "Educational Telecommunications" and a brief summary of the current national and state use of educational telecommunications.

"Educational Telecommunications" Defined

"Educational telecommunications" is a term that refers to applications of media such as:

Public television
Cable television
Satellite television
Video tape
Audio tape
Telephone teleconferencing
Computer conferencing

These electronic media allow students and their instructor to communicate even though they are in different locations and, by use of tape or computer conferencing, they may even be working on the course at different times. Instruction using electronic telecommunications is often referred to as "distance learning."

These electronic media also allow the instructor to supplement, amplify, and review the content provided by the course text(s). These media can facilitate interaction between students and instructor, as well as among students.

Videotapes can be made locally or can be licensed from national sources and distributed to students over public television, cable television, or by satellite. Students frequently tape these programs for replay at more convenient times. The tapes do not always have to be broadcast. They can also be loaned to students through libraries, media centers, or video outlets.

Interaction is possible by linking phone calls from students and the instructor into a conference call. Regular telephones or microphones can be used depending on how many individuals are participating at each location. Computers can also be used for interaction, sending written messages instantly among participants; however, computers can be used even more

effectively when participants do not have to be present to participate. For example, students post messages on an electronic bulletin board stored in the computer or send electronic messages to each other and their instructor. Everyone can read and react to messages when they have time rather than having to be on the computer at one specific time. The instructor can set deadlines for comments and can review the activity at any time.

Electronic telecommunications can also be used to enhance the quality of instruction. Content experts who would not be able to visit a classroom can be brought to students on tape, by satellite, or even by phone. In the same way, students can be shown things or places not possible in the traditional classroom setting without the use of media. Furthermore, when the instruction is taped, students can replay the tape to review difficult concepts or content missed initially.

In short, when a course is carefully designed to take into account the strengths and weaknesses of the media to be used, the telecommunicated course can be as effective as any other more traditional form of instruction. It also has the potential of reaching many students who could not attend or were not being served by traditional classes.

Summary of National and State Use of Educational Telecommunications

The use of educational telecommunications nationwide has been growing at increasing rates as more and more colleges offer courses for distance learning. A number of states have organized to make distance learning opportunities available across large regions or states. For example, the Northern Illinois Learning Resources Cooperative is a consortium of approximately 40 colleges with 28,754 students enrolled in telecommunications courses during 1988-89. College of the Air (formerly Maryland College of the Air), a consortium of 24 community colleges in Maryland, South Central Pennsylvania, and Northern Virginia plus the Open University at the University of Maryland, reported over 9,000 telecourse students at the member schools. These figures represent only credit course enrollments and do not count thousands of students in other distance learning programs in those areas.

While students involved in distance learning credit courses cut across all demographic categories, there are some general characteristics that explain the need and popularity of these programs. Typically, two-thirds of the students are women--most working a full-time job in addition to taking one or more courses. Distance learners report that they are taking the course through this method because their family responsibilities and/or work schedules would not let them take the course on campus.

The popularity of satellite teleconferences is largely a factor of convenience. Participants have an opportunity to interact with content experts from around the country on state-of-the-art topics without having to travel great distances or pay huge fees. Furthermore, many of these events can be taped to allow those not in attendance to view the session later.

Within Virginia, thousands of students are participating in distance learning programs. Shown below are some rough figures from some of the VCCS institutions offering distance learning options to students (all figures are approximate):

Credit Courses

New River	10-12 courses per term 200+ students per term
Northern Virginia	75-80 courses per term 3,000+ students per term
John Tyler	20+ courses per term 350-400 students per term
Tidewater	15+ courses per term 700+ students per term

Satellite Teleconferences

New River	40 events per year 800+ participants
Northern Virginia	137 events per year 1,150+ participants
John Tyler	15 events per year 450+ participants
Tidewater	61 events per year 880+ participants

(Satellite teleconferences include non-credit community service and staff development programs; they also include programs which are free and those which require license fees.)

Other Successful Telecommunications Use

Virginia Highlands	Political Science by computer
Northern Virginia	Technical Writing by computer conferencing
	6 Music courses offered across three campuses by audio-slow-scan video teleconferencing

The figures above indicate student interest in Virginia. They also show the wide disparity in availability across the state, even among VCCS institutions that offer distance learning options. In fact, most VCCS institutions offer no distance learning courses and few, if any, satellite teleconferences.

Primary reasons that these services are not available uniformly across Virginia are that (1) many VCCS institutions lack the initial investment to start a distance learning program using electronic telecommunications; (2) they do not have sufficient enrollments to justify the license costs required to offer the variety of distance learning courses and teleconferences available at other institutions; and (3) they do not have the expertise or available staff to manage the logistics of a distance learning program.

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